

Application No.: 09/835,866
Amendment

R E M A R K S

Reconsideration of the application in view of the above amendments and following remarks is respectfully requested. Claims 1, 3, 5, 6, 7, 10, 13, 23 and 25 have been amended. Therefore, claims 1-34 are pending in the application. Please note that Applicant has made his amendments in accordance with the new Revised Amendment Format recently published by the USPTO.

Information Disclosure Statement

Applicant has submitted another Supplemental Information Disclosure Statement (IDS) for this application herewith. Therefore, Applicant respectfully requests the Examiner to consider the listed references and to provide an initialed and signed copy of the Form PTO-1449 with the next paper in this application.

Claim Rejections under 35 U.S.C. § 102

The Examiner rejected claims 1-4, 7-12, 23-26, 31 and 33 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0122230 A1 to Izadpanah et al. ("Izadpanah et al."). Applicant respectfully traverses these rejections.

Applicant has amended independent claim 1 in a manner that distinguishes Izadpanah et al. Namely, claim 1 has been amended to recite the step of "determining whether or not there is more than one alternate communication path available". Applicant's independent claim 23 has been amended in a similar manner. These amendments are supported by Applicant's specification and drawings as originally filed at, for example, page 13, lines 13-24 of Applicant's

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specification, step 410 of Applicant's FIG. 5, and step 318 of Applicant's FIGS. 4 and 5, as well as other parts of the specification and drawings.

The Examiner has not identified anything in Izadpanah et al. that discloses the step of "determining whether or not there is more than one alternate communication path available". Furthermore, such a step would not be obvious in view of Izadpanah et al. Namely, given that the portions of Izadpanah et al. identified by the Examiner disclose only the laser portion 104 and the radio frequency portion 106, a person of ordinary skill in the art would have no reason to add Applicant's recited "determining" step. Therefore, the rejection of Applicant's amended independent claims 1 and 23 should be withdrawn. Furthermore, the rejection of dependent claims 2, 4, 8, 9, 11, 12, 24, 26, 31 and 33 should also be withdrawn for at least these same reasons since they depend from one of claims 1 and 23.

Applicant respectfully traverses the rejection of claim 7, and so Applicant has amended claim 7 to place it in independent form, incorporating the version of claim 1 without the current amendment. Specifically, in rejecting claim 7 the Examiner simply included it in the rejection of claims 2, 8 and 24 and did not identify where Izadpanah et al. allegedly discloses the subject matter of claim 7. Furthermore, the portions of Izadpanah et al. identified by the Examiner appear to disclose nothing about using a free-space optical link that is not adversely affected by the one or more environmental conditions as the alternate communication path. Applicant provided an example of how this can be done in his FIG. 3 and his specification at page 8, line 24 through page 9, line 9. Applicant stated therein that "[u]se of the free-space links 224, 228 may be possible if they are not affected by the same

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microclimate affecting the free-space link 200." Applicant submits that his claim 7 would not be obvious in view of Izadpanah et al. because there appears to be no disclosure therein of alternate paths for the laser portion 104 that comprise other free-space links not adversely affected by the environmental conditions affecting the laser portion 104. Therefore, the rejection of Applicant's claim 7 should be withdrawn.

Applicant respectfully traverses the rejection of claims 3 and 25, and so Applicant has amended claims 3 and 25 to place them in independent form, incorporating the versions of claims 1 and 23, respectively, without the current amendment. Specifically, in rejecting claims 3 and 25 the Examiner merely refers to Izadpanah et al.'s FIG. 1(a) as disclosing an alternate communication path that comprises more than one mode of communication. Applicant disagrees that such is disclosed in Izadpanah et al.'s FIG. 1(a). Applicant explained in his specification on pages 8-9 and FIG. 3 that the alternate communication path itself may use more than one mode of communication. For example, one part of the alternate communication path may use fiber optic cable, another part of the same alternate communication path may use RF communications, and still another part of the same alternate communication path may use wire cable. Because Izadpanah et al.'s FIG. 1(a) does not disclose an alternate communication path that comprises more than one mode of communication, the rejection of Applicant's claims 3 and 25 should be withdrawn. These remarks also apply to Applicant's claim 17.

Applicant respectfully traverses the rejection of claim 10, and so Applicant has amended claim 10 to place it in independent form, incorporating claim 9 and the version of claim 1 without the current amendment. Specifically, the

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Examiner states that Applicant's "polling the instrument" step is disclosed in the identified portion of Izadpanah et al. However, Applicant cannot find the word "polling" in this portion of Izadpanah et al., nor anywhere else therein. Furthermore, Applicant cannot find anything else in the identified portion of Izadpanah et al. that discloses the step of "polling the instrument from within the free-space optical network". Therefore, the rejection of Applicant's claim 10 should be withdrawn.

Claim Rejections under 35 U.S.C. § 103 based on Izadpanah et al.

The Examiner rejected claims 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Izadpanah et al.

Applicant respectfully traverses the rejection of claims 5 and 6, and so Applicant has amended claims 5 and 6 to place them in independent form, incorporating the version of claim 1 without the current amendment.

In rejecting claims 5 and 6 the Examiner simply states that it would have been obvious to obtain an alternate communication path that comprises a fiber optic (claim 5) or wire (claim 6) communication path in order to avoid the adverse consequences that the environment and atmosphere can have on the transmitted light beams. In making these rejections the Examiner cites no other references and no supporting documentary evidence.

Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness of Applicant's claims 5 and 6 for several reasons. First, section 2143.01 of the Manual of Patent Examining Procedure (MPEP) states:

"Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching,

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suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art."

MPEP § 2143.01 Suggestion or Motivation To Modify the References.

In his rejections of claims 5 and 6, the Examiner is presumably proposing that it would be obvious to modify Izadpanah et al.'s system to use a fiber optic or wire communication path instead of the radio frequency portion 106. Furthermore, the Examiner presumably contends that the motivation for his proposed modifications to Izadpanah et al. is "to avoid the adverse consequences that the environment and atmosphere can have on the transmitted light beams." (Office Action mailed 01/08/2003, page 5). Applicant submits, however, that this would not be a motivation to add a fiber or wire alternate path to Izadpanah et al.'s system because Izadpanah et al. have purportedly already solved these issues by having the radio frequency portion 106 redundant to the laser portion 104. To the extent that the Examiner's stated motivation would motivate a person of ordinary skill in the art to add a fiber or wire alternate path to Izadpanah et al.'s system, Applicant submits that the motivation was obtained by impermissible hindsight vision afforded by Applicant's specification. Therefore, the Examiner having provided no motivation or improper motivation to modify Izadpanah et al.'s system, the rejections must be withdrawn.

Next, section 2143.01 of the Manual of Patent Examining Procedure (MPEP) states:

"If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to

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render the claims *prima facie* obvious."

MPEP § 2143.01 Suggestion or Motivation To Modify the References.

With respect to the Examiner's rejections of claims 5 and 6, and the Examiner's presumed proposed modifications to Izadpanah et al.'s system, such modifications would change the principal of operation of Izadpanah et al., which teaches reliance on the radio frequency portion 106 when the laser portion 104 fails. Moreover, to use a fiber optic or wire communication path in Izadpanah et al. instead of the radio frequency portion 106 could also change the principal of operation of Izadpanah et al.'s controllers shown in his FIGS. 3(a)-3(d). Therefore, the rejections must be withdrawn.

Next, section 2143.03 of the MPEP states:

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)."

MPEP § 2143.03 All Claim Limitations Must Be Taught or Suggested.

In rejecting Applicant's claim 5 the Examiner has not shown where a reference teaches or suggests "wherein the alternate communication path comprises a fiber optic communication path", and in rejecting Applicant's claim 6 the Examiner has not shown where a reference teaches or suggests "wherein the alternate communication path comprises a wire communication path". In other words, the Examiner has not identified where or how Izadpanah et al. teaches or suggests these limitations, and the Examiner has not cited any other reference or documentary evidence that teaches or suggests these

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limitations. Therefore, the rejections must be withdrawn.

Finally, if the Examiner is attempting to base the rejection of claims 5 and 6 on Official Notice or upon Common Knowledge, then pursuant to MPEP § 2144.03(C) Applicant hereby traverses and challenges such factual assertions as not properly officially noticed or not properly based upon common knowledge. Specifically, the error in the Examiner's action is that he has not provided any supporting documentary evidence that teaches or suggests the limitations of claims 5 and 6. Furthermore, Applicant submits that the limitations of claims 5 and 6 are not common knowledge or well-known in the art because the issue is not simply the availability or existence of fiber optics or wire. Instead, claims 5 and 6 deal with the use of fiber optics or wire as an alternate communication path in a free-space optical network that routes the network data traffic through an alternate communication path in response to data obtained from a step of monitoring one or more environmental conditions in a vicinity of at least one of the one or more free-space optical links. Applicant submits that this concept is not at all common knowledge or well-known in the art, and therefore, any rejections based on such must be solidly supported with documentary evidence. Therefore, the rejections must be withdrawn.

Claim Rejections under 35 U.S.C. § 103 based on Izadpanah et al. and Bae

The Examiner rejected claims 13, 14, 27-30 and 34 under 35 U.S.C. § 103(a) as being unpatentable over Izadpanah et al. in view of U.S. Patent No. 5,790,286 to Bae. Applicant respectfully traverses these rejections.

Initially, with respect to independent claim 29, this is the second time the Examiner has disregarded limitations of

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this claim and entered a rejection. Specifically, the Examiner has simply not identified where any of the cited references disclose the step of "re-evaluating the alternate communication path selection" that is recited in claim 29. Applicant discussed this re-evaluation feature in his specification, stating:

"During the time that the network traffic is being routed through an alternate communication path, it may be desirable to re-evaluate the alternate communication path selection. Thus, if in steps 308 and 310 it is determined that visibility continues to be below the minimum level and that an alternate communication path is already being used for the network traffic, the selection of the specific alternate communication path can be re-evaluated in step 332. Such re-evaluation may be desirable in view of changes in data rate requirements of the network traffic, duration of the poor visibility or other inclement weather conditions, costs associated with the current alternate communication path, etc. By way of example, the method used for the re-evaluation step 332 may be similar to, or the same as, the alternate path selection method 318."

(Applicant's specification, page 12, lines 19-30). Therefore, because the Examiner has disregarded this claim limitation, the rejection of claim 29 must be withdrawn. Furthermore, the Examiner has also not identified where any of the cited references disclose the step of "selecting an alternate communication path for the network data traffic in response to the alarm", as is recited in claim 29. This is another reason the rejection should be withdrawn.

Applicant respectfully traverses the rejection of claim 13, and so Applicant has amended claim 13 to place it in independent form, incorporating claim 9 and the version of claim 1 without the current amendment.

With respect to claims 13, 14, 27 and 29, Applicant

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submits that the combination of Izadpanah et al. and Bae does not establish a *prima facie* case of obviousness for several reasons.

First, the Examiner states that "Bae teaches sending an alarm over the free-space optical network in response to the data indicative of at least one of the one or more environmental conditions falling below the predetermined level." (Office Action, page 5, lines 15-17). This statement is simply not correct. The portions of Bae cited by the Examiner say nothing about free-space optics or environmental conditions. Therefore, the rejections should be withdrawn.

Next, Applicant submits that the combination of Izadpanah et al. and Bae does not disclose all of the limitations of claims 13, 27 and 29. For example, with respect to claims 27 and 29, the combined references do not disclose the entire step of "sending an alarm over the free-space optical network in response to data obtained from the step of monitoring one or more environmental conditions in a vicinity of at least one of the one or more free-space optical links". Claim 13 recites similar language. While Bae may disclose an alarm being sent over an optical cable, the Examiner has shown nothing in the combined references that discloses, suggests or shows a motivation for sending Bae's alarm over a "free-space optical network". Certainly Bae does not suggest anything about free-space optics or sending an alarm over a free-space network.

Furthermore, the Examiner has shown nothing in the combined references that discloses, suggests or shows a motivation for sending Bae's alarm "in response to data obtained from the step of monitoring one or more environmental conditions", as recited in claims 27 and 29. This is because Bae discloses nothing about environmental conditions or

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weather. Moreover, it would not be obvious to a person of ordinary skill in the art to modify Bae's alarm to be sent in response to environmental condition data because this would destroy Bae's intended function and principle of operation that the alarm data (Alarm1 or Alarm2) be indicative of an abnormal existence or a nonexistence of the operation upon transmitting the data to the respective receiver (RX1 or RX2) due to a fault in either the optical/electrical or electrical/optical converters. (See Bae, col. 1, lines 53-58, and col. 4, lines 13-47).

Finally, Applicant submits that Bae cannot be properly combined with Izadpanah et al. Namely, a person of ordinary skill in the art following the teachings of Izadpanah et al. to make a hybrid RF and optical wireless communication link would have no motivation whatsoever to use the teachings of Bae, which is directed to data transmission through optical cables. Furthermore, any attempt to modify Izadpanah et al. to incorporate Bae's system would change Izadpanah et al.'s principle of operation as described above.

Therefore, Applicant submits that the rejections of claims 13, 27 and 29 should be withdrawn. Furthermore, the rejection of claim 14 should be withdrawn for reasons similar to those discussed above for claim 29, and the rejections of claim 28 and 30 should be withdrawn for reasons similar to those discussed above for claim 3. The rejection of dependent claim 34 should also be withdrawn for at least the same reason as claim 27 since it depends therefrom.

Claim Rejections under 35 U.S.C. § 103 based on Izadpanah et al. and Dodley et al.

The Examiner rejected claims 15-22 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Izadpanah et al. in view

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of U.S. Patent No. 5,966,229 to Dodley et al. ("Dodley et al."). Applicant respectfully traverses these rejections.

Applicant submits that the rejection of independent claim 15 should be withdrawn because Izadpanah et al. in view of Dodley et al. does not establish a *prima facie* case of obviousness of the claim for several reasons.

First, Applicant submits that the combined references do not disclose all of the limitations of claim 15. Namely, claim 15 recites "routing the network data traffic through an alternate communication path in response to a failure in the step of attempting to adjust". The Examiner appears to state that this limitation is disclosed by Izadpanah et al. (see Office Action, page 6, last paragraph), but then the Examiner states that Izadpanah et al. does not specifically teach attempting to adjust (See Office Action, page 7, line 1). Applicant submits that the Examiner has not adequately shown where or how the references disclose this limitation. For example, the Examiner has not explained how Dodley et al.'s adjusting the power and wavelength of the transmitted laser beam will somehow be incorporated into Izadpanah et al.'s system so that network data traffic will be routed through an alternate communication path in response to a failure in the step of attempting to adjust. Therefore, this claim limitation not having been sufficiently addressed, the rejection should be withdrawn.

Next, as discussed in Applicant's previous amendment, Applicant submits that any attempt to modify Dodley et al. to add an alternate communication path would change Dodley et al.'s principle of operation. This is because Dodley et al. maintains stable and reliable communications based on the principle of adjusting the power and wavelength of the transmitted laser beam of the free-space optical

communications transmitter. Dodley et al. does not suggest the use of a radio or of an alternate communication path in any way, and Dodley et al.'s entire purpose is to keep the free-space optical communications path operational. The addition of an alternate communication path to Dodley et al. would be basing the maintenance of stable and reliable communications on a completely different principle than what Dodley et al. discloses. Namely, the addition of an alternate communication path would render irrelevant Dodley et al.'s exhaustive discussion of adjusting the power and wavelength of the transmitted laser beam and the use of a chamber containing atmospheric gases that simulate the absorption spectrum of the light-absorbing atmospheric gases present in the free-space optical path of the transmitted beam. Therefore, because the proposed modifications to Dodley et al. would change its principle of operation, a person of ordinary skill in the art would not find a reason to make the modifications, which means that a *prima facie* case of obviousness of Applicant's independent claim 15 has not been established.

Therefore, Applicant submits that the rejection of claim 15 should be withdrawn. Furthermore, the rejection of claim 17 should be withdrawn for the same reasons discussed above for claim 3, the rejection of claim 19 should be withdrawn for the same reasons discussed above for claim 5, the rejection of claim 20 should be withdrawn for the same reasons discussed above for claim 6, and the rejection of claim 21 should be withdrawn for the same reasons discussed above for claim 7. Finally, the rejection of dependent claims 16, 18, 22 and 32 should also be withdrawn for at least the same reason as claim 15 since they depend therefrom.

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Fee For Additional Claims

Fees have previously been paid in this application for a total of 34 claims with 5 claims being independent claims. The above amendment results in there being a total of 34 claims with 12 claims being independent claims. Thus, a fee is believed to be due for 7 extra independent claims.

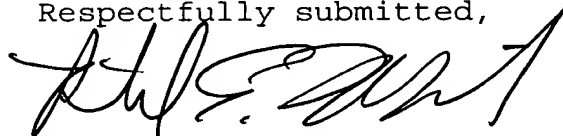
A Fee Transmittal is enclosed herewith to cover the fee for additional claims, as well as the fee for the additional Supplemental IDS submitted herewith.

C O N C L U S I O N

In view of the above, Applicant submits that the pending claims are in condition for allowance. Should there remain any outstanding issues that require adverse action, it is respectfully requested that the Examiner telephone Richard E. Wawrzyniak at (858)552-1311 so that such issues may be resolved as expeditiously as possible.

Dated 4/8/03

Respectfully submitted,



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